

ABSTRACT OF THE DISCLOSURE

An encapsulated electrode assembly which retains a highly reactive material to enhance reaction efficiency within a liquid electrolyte battery cell. The electrode assembly comprises a structural member of a first active material
5 formed into a chamber within which is retained a highly reactive non-structural second active material that preferably comprises a particulated form of reactive material which provides increased electrochemical reaction per unit area in relation to the first reactive material. By way of example, when the invention is practiced within a lead-acid battery, the electrode pouch preferably comprises a
10 reactive structural lead alloy, and the highly reactive material comprises lead containing compounds that support charge generation within the battery. The encapsulated electrode may additionally incorporate grids within, and in contact with, the chamber to further reduce current density within the electrode.